

[0054]

ABSTRACT

[0055] A halogen-containing gas is injected into a flowing transport air/sorbent stream at a point close to the point where the sorbent and transport air first mix to maximize the residence time available for the halogen-containing compound to be adsorbed onto the sorbent surface prior to the sorbent being injected into a flue gas containing mercury. This process maximizes the benefit and utilization of the halogen-containing reagent by placing it exactly where it is needed to facilitate elemental mercury removal – on the surface of the sorbent. The sorbent particles with their loading of adsorbed halogen-containing reagent enter the flue gas with a high reactivity for the removal of elemental mercury.